Agenda

- 8:30am Welcome
- 8:35am Shaheen III Hardware Overview
- 8:55am How to apply on Shaheen III
- 9:05am Getting Started on Shaheen III

Job Scheduling

Coffee Break

- 9:15am Software Environment
- 9:35am
- 10:00am
- 10:15am

10:50 am

·10 am

workflow

Applications software example: VASP workflow

Storage overview & Best practices

Applications software example: CFD applications

Applications software example: Bio informatics



Shaheen III Survey





CFD Basic Module

How to Run Various Test Cases on Shaheen?

Rooh Khurram

Supercomputing Laboratory King Abdullah University of Science and Technology (KAUST), Saudi Arabia



CFD Services

- Software: Maintaining and Upgrading Software and Test Cases
- Training: Basic, Intermediate and Advanced
- Helpline: cfd-helpline@hpc.kaust.edu.sa
- CFD Consulting Projects
- ANSYS Workshop Series
- CFD User Group Meetings
- Student Certification
- 1-week Summer & Winter CFD School





Basic CFD Module

- Quick Overview of Applications on Shaheen
- Typical CFD workflow
- CFD Example Cases
 - Ansys/Fluent
 - CONVERGE
 - OpenFOAM
 - Paraview
 - Tecplot
 - Strong Scalability
 - Interactive Computing in Batch Mode
- Shaheen users can find all material here:

/sw/ex111genoa/openfoam/cfd_module



Applications on Shaheen

CFD Applications:

- Commercial codes (Fluent, CONVERGE)
- Open source codes (OpenFOAM)
- Code development tools (dealii, FEniCS, OpenFOAM)
- Mesh generation (ANSYS)
- Post processing (Tecplot, visit, paraview, Ensight)

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Home - Resources

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Analysis

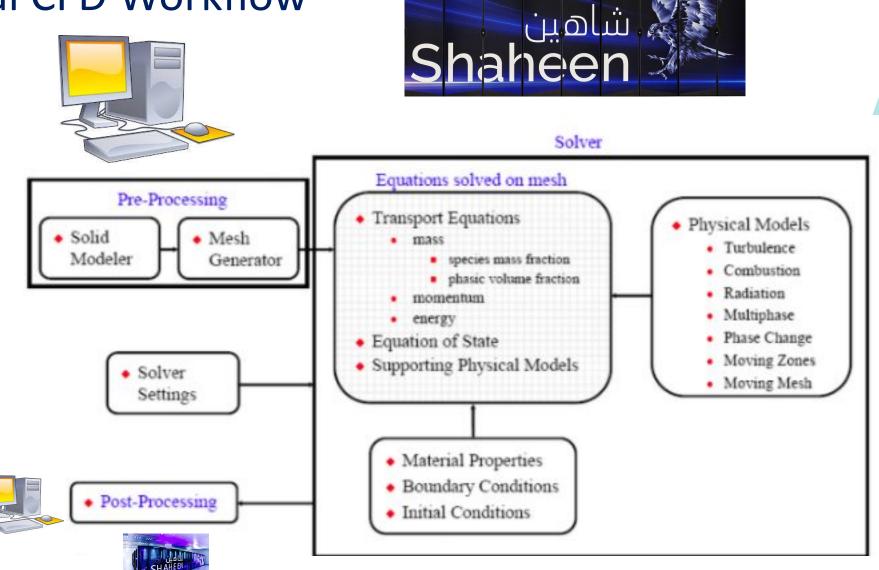
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Software Environment Tools Tools Performance



Typical CFD Workflow





Hands-on Demo

- Log into Shaheen
- cd /scratch/\$USER
- cp -r /sw/ex111genoa/openfoam/cfd_module .
- cd cfd_module

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